**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
REGION 8, MONTANA OFFICE
FEDERAL BUILDING, 10 West 15th Street, Suite 3200
HELENA, MONTANA 59626

Ref: 8MO

March 26, 2008

Mr. Tom Ring
Environmental Sciences Specialist
Montana Dept. of Environmental Quality
P.O. Box 200901
Helena, Montana 59620-901

Re: CEQ # 20080054, Montana Alberta Tie Ltd. 230-kV International Transmission Line DEIS

Dear Mr. Ring:

The Environmental Protection Agency (EPA) Region VIII Montana Office has reviewed the Draft Environmental Impact Statement (DEIS) for the Montana Alberta Tie Ltd. (MATL) 230-kV International Transmission Line, in accordance with EPA responsibilities under the National Environmental Policy Act (NEPA), 42 U.S.C. 4231 and Section 309 of the Clean Air Act. Section 309 of the Clean Air Act directs EPA to review and comment in writing on the environmental impacts of any major Federal agency action. The EPA's comments include a rating of both the environmental impact of the proposed action and the adequacy of the NEPA document.

The EPA does not object to the proposed construction and operation of the MATL 230-kV transmission line from Great Falls, Montana into Alberta, Canada. Although, we recommend the DOE and MDEQ consider construction of a new modified preferred alternative that would better optimize the many environmental, social and economic trade-offs for this project (i.e., trade-offs in impacts to farm operations and residences, soil erosion during construction, water quality and wetland impacts, impacts to birds and wildlife habitat, costs, etc.). The intent should be to address project purpose and need and the significant issues while minimizing adverse environmental impacts. Evaluation of a modified alternative in the FEIS may also better explain to the public the many trade-offs involved in making transmission line decisions, which may lead to improved public acceptance of decisions. In general desirable features we consider worthy of including in a new modified preferred alternative include:

- minimize soil disturbance and soil erosion by selecting alignments on less erosive soils and that reduce the extent of ground disturbance as much as possible;

- use monopoles rather than H-frame structures wherever possible to reduce soil disturbance and impacts to farm operations;

- incorporate appropriate construction sediment and erosion control methods and BMPs, as well as weed prevention and control measures during construction;

- minimize new access roads and new road construction, and locate any new roads that may be needed where they have minimal impacts, away from rivers, streams and wetlands;

- minimize stream and lake crossings, and disturbances of wetlands and riparian areas;

- minimize disturbances to sensitive wildlife habitat, and use appropriate mitigation measures to reduce wildlife impacts, particularly transmission line mortality to birds;

- minimize adverse impacts to farm operations and residences;

- minimize fragmentation of open landscapes from a scenic standpoint, and use topographical features to help screen the transmission poles as much as possible;

- consider costs of construction and operation.

We note of course that the MDEQ and DOE will need to evaluate and analyze the impacts of any new modified alternative, and display those impacts in the FEIS.

We also want to state that it appears to us that Alternative 3 would have fewer environmental impacts than the other action alternatives. Alternative 3 would have the shortest alignment (121.6 miles) with the fewest stream and lake crossings (12), fewest acres of wetlands within 500 feet of the alignment (62.3 acres), and least amount of construction ground disturbance (206 acres). Alternative 4 would have the longest transmission line (139.6 miles) with greatest number of stream and lake crossings (19), greatest potential wetland impact (76.4 acres), and greatest ground disturbance (240 acres), although Alternative 4 would reduce impacts to farm operations. Alternative 2 would appear have impacts between those of Alternatives 3 and 4, with 129.9 miles transmission line length, 14 stream and lake crossings, 76.4 acres of potential wetlands impacts, and 214 acres of ground disturbance.

We recognize that there are many considerations and trade-offs involved in evaluating the transmission line alternatives, but we want to emphasize our interest that minimization of environmental impacts be considered as an important criterion in the decision making process. We support reductions in soil, water quality, wetlands, fisheries and wildlife impacts when finalizing alignment alternatives and evaluating the many project trade-offs.

We also believe that the FEIS and Record of Decision (ROD) should clearly explain the process and underlying rationale for the selection of the Preferred Alternative, and the environmentally preferred alternative should be identified in the ROD [40 CFR 1505.2(b)].

We appreciate the listing of the MATL environmental protection measures in Table 2.3-4, and the MDEQ environmental specifications included in Appendix F. The Appendix F environmental specifications protection measures appear to be particularly detailed and comprehensive. We support utilization of these environmental specifications and environmental protection measures to avoid or reduce the intensity and duration of impacts to the environment. We encourage use of the most comprehensive set of environmental protection measures using the most protective measures from both MATL's and MDEQ's lists.

We also believe that if there is likely to be any increase in pollutant delivery (e.g., sediment) to water quality impaired waters listed by the State of Montana under Section 303(d) of the Clean Water Act as a result of construction and/or operation and maintenance of the transmission line that watershed restoration activities should also be included in the project to offset sediment delivery from transmission line and access road construction. This is needed to assure that no further degradation occurs to the several 303(d) listed streams along the project alignments (i.e., Old Maids Coulee -an intermittent stream, Pondera Coulee, Cut Bank Creek, Marias River, Teton River, Lake Creek, the Missouri River, and Benton Lake). For example, we recommend stabilization of existing eroding banks; improving/installing BMPs on additional existing roads, perhaps in cooperation with local governments, to reduce existing road sediment sources. Unless existing sediment sources are reduced, we believe there will be potential to further degrade 303(d) listed streams by transmission line and road construction.

We also encourage the DOE and MDEQ Major Facility Siting Act staff to contact MDEQ's TMDL Program staff to assure that the MDEQ Watershed Protection and TMDL staff consider the proposed project to be consistent with MDEQ's development TMDLs and Water Quality Plans for the applicable TMDL Planning Areas (contact Robert Ray of the MDEQ in Helena at 444-5319).

The DEIS states that there could be alterations to wetland hydrology, wetland plant communities and inadvertent filling of wetlands or sedimentation of wetlands, although no direct filling of wetlands is intended. We recommend that there be a strict prohibition of placement of transmission line pole structures in wetlands, rather than just avoiding placement in wetlands "wherever possible," and that a wetland buffer zone be used to avoid even inadvertent construction impacts to wetlands (e.g., 50 foot wetland buffer zone). We also recommend that wetlands be flagged on the ground to facilitate contractor avoidance and inadvertent wetland impacts. If any wetlands are to be impacted the extent of impacts should be more clearly estimated and disclosed. The final EIS should also more clearly identify and disclose probable wetland impacts, as well as the mitigation activities that would compensate for unavoidable impacts to wetlands.

In addition, we recommend that the FEIS include maps that identify locations of important migration corridors of birds and along with identified potential collision hazard areas. This will provide the public and the decision maker with a clear understanding of the locations where effects to avian species are likely to be the greatest; assist in selecting alignments that avoid avian flyways; and help focus identification of the mitigation measures needed to eliminate or reduce avian effects.

Finally, the DEIS does not provide much information about the construction of the transmission line and new substation in Alberta, Canada or the proposed route of the Canadian transmission line. We recommend that the FEIS identify the agency responsible for construction of the transmission line in Canada, and a contact person with that agency, and provide a discussion of the applicability of Executive Order 12114 *Environmental Effects Abroad of Major Federal Actions* and *CEQ's Guidance on NEPA Analyses for Transboundary Effects, July 1, 1997* in regard to the proposed MATL transmission line (http://www.nepa.gov/nepa/regs/transguide.html). We believe additional information about project implementation in Canada and any significant environmental effects that may occur as a result should be provided in the FEIS.

The EPA's further discussion and more detailed questions, comments, and concerns regarding the analysis, documentation, or potential environmental impacts of the Montana Alberta Tie Ltd. International Transmission Line DEIS are included in the enclosure with this letter. Based on the procedures EPA uses to evaluate the adequacy of the information and the potential environmental impacts of the proposed action and alternatives in an EIS, the DEIS has been rated as Category EC-2 (Environmental Concerns - Insufficient Information). A copy of EPA's rating criteria is attached. The EPA believes additional information is needed to fully assess and mitigate all potential impacts of the management actions.

The EPA appreciates the opportunity to review and comment on the DEIS. If we may provide further explanation of our comments and concerns please contact Mr. Steve Potts of my staff in Helena at (406) 457-5022 or in Missoula at 406-329-3313, or via e-mail at potts.stephen@epa.gov . Thank you very much for your consideration.

Sincerely,

/s/ Julie Dalsoglio
for John F. Wardell,
Director
Montana Office

Enclosures
cc: w/ enclosures
Larry Svoboda/Julia Johnson, 8EPA-N, Denver
Robert Ray/Mark Kelley, MDEQ, Helena
Carol M. Borgstrom, DOE, Washington DC

# EPA COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE MONTANA ALBERTA TIE (MATL) 230-KILOVOLT TRANSMISSION LINE

## Brief Project Overview

The U.S. Dept. of Energy (DOE), Office of Electricity Delivery and Energy Reliability, and Montana Dept.of Environmental Quality prepared this EIS to evaluate impacts of a proposal to construct the Montana Alberta Tie Ltd. (MATL) 230-kilovolt (kV) electric transmission line across the U.S. – Canada border in northcentral Montana. Originally DOE and MDEQ prepared an Environmental Assessment (EA) to evaluate this project which would require granting a Presidential Permit from DOE and a Major Facility Siting Act (MFSA) certificate of compliance from MDEQ. However, based on comments received on the EA relating to land use and potential effects on farming, it was determined that an EIS should be prepared.

The proposed project is an international 240/230-kV alternating current merchant (private) transmission line that would originate at an existing NorthWestern Energy (NWE) 230-kV switch yard near Rainbow Dam at Great Falls, Montana, and extend north to a new substation to be constructed northeast of Lethbridge, Alberta, crossing the U.S.-Canada international border north of Cut Bank, Montana. The total length of transmission line would be 203 miles, with approximately 126 miles constructed inside the U.S. The transmission line would be owned by MATL, a private Canadian corporation owned by Tonbridge Power. The proposed line would be part of the Western Interconnection (western grid), and a phase shifting transformer would be installed at the substation near Lethbridge to control the direction of power flows on the line. The MATL application for certification described the following purpose and need:

> *The Project would be the United States' first power transmission interconnection with Alberta and is expected to facilitate development of additional sources of generation (e.g., windfarms both in northern Montana, and southern Alberta), and improve transmission system reliability in Montana, Alberta, and on a regional basis in both the U.S. and Canada. In addition, the Project would promote increased trade in electrical energy across the international border, and provide a transmission route to balance energy surplus/shortage situations in an efficient and economic manner.*

The line would directly connect Montana and Alberta's regional operating transmission systems, and would allow power to flow directly between these two systems where there is no current connection. The proposed transmission line would have the capacity to carry up to 300 MW north and 300 MW south for a total capacity of up to 600 MW. However, due to constraints on the current system where MATL would tie in at Great Falls, the full capacity of 300 MW to the south would not be realized unless additional upgrades are made.

The proposed new transmission line could support a modest increase of new electricity generators, such as wind, in the study area by connecting them to regional grids and thus

potentially to electricity markets. A connection could provide access to markets for new wind generation facilities in the vicinity of the proposed transmission line and improve transmission access to markets seeking new energy resources. Additional transmission capacity is needed for the viability of new energy generation enterprises, and added capacity from this proposed transmission line could support a modest increase in new power generation in Montana, including wind energy. The region of Montana to be crossed by the proposed transmission line has a high potential for development of wind resources.

The proposed tie line between Montana and Alberta, may also result in benefits to transmission system operators whose service areas include Montana and to utilities that provide transmission service within the state. A modified transmission system could provide more options for power routing within Montana, increase energy transactions between Montana and Alberta, and allow for easier balancing of energy surpluses and shortages within and between balancing authority areas. Because tie lines are able to connect with adjacent electric systems, different generation resources can combine to provide a level of reliability that one jurisdiction could not otherwise afford if that jurisdiction had to cover the same resources independently. The MATL line could also create another opportunity for Montana's largest privately owned transmission and distribution utility, NorthWestern Energy, to obtain regulating reserves for its transmission system control area.

Four alternatives have been evaluated including No Action (Alternative1). Alternative 2 is MATL's proposed project to construct and operate a 129.9 mile long, 230-kV merchant transmission line between Great Falls, Montana, and Lethbridge, Alberta. The proposed alignment would have an operational ROW width of 45 feet with an additional 30 feet on either side to create a 105-foot safety zone. The line would extend from the expanded 230-kV Great Falls switch yard north of Great Falls to a proposed new substation south of Cut Bank, and then north to the Montana-Canada border at the western edge of the Red Creek Oil Field. Monopole structures would be used on 53 miles of the line where it would cross cropland and Conservation Reserve Program (CRP) land diagonally. H-frame structures would be used for the remainder of this alternative. Costs are estimated to be $40.6 million with mitigation.

Alternative 3 is a modified MATL alignment B proposal for a 121.6 mile transmission line that would be similar to Alternative 2 in width of the ROW, types of access roads, and other features., but the alignment would generally parallel an existing 115-kV transmission line along the entire route from the Great Falls switch yard to a substation near Cut Bank and use only H-frame structures. Alternative 3 was developed by MATL in response to a single siting criterion under MFSA that gives consideration to paralleling existing utility corridors (Circular MFSA-2). This alternative alignment was not intended to address potential land use issues or maintenance issues but is the shortest and potentially the least costly alternative under consideration. Costs are estimated to be $36.3 million with mitigation.

Alternative 4 was developed by the DEQ to address public concerns regarding line interference with farming activities and close proximity to residences. Alternative 4 would be 139.6 miles long and would be similar to Alternative 2 in that width of the ROW and other features, but would incorporate a higher degree of environmental protection than either

Alternative 2 or 3 since it would employ DEQ's draft Environmental Specifications. The Alternative 4 alignment would use portions of the Alternative 2 alignment from north of Conrad to the Montana-Alberta border. In other areas it would maximize the use of range and pasture land, where available. Where cultivated land would be crossed, it would generally be located along field or strip boundaries. Alternative 4 would require the use of monopole structures on all 88.9 miles of cropland and CRP land, not just where cropland and CRP land are crossed on the diagonal as in Alternative 2. Although Alternative 4 is analyzed as a whole, the agencies could select some or all parts of this alternative or other realignments. Costs are estimated to be $44.9 million with mitigation . MATL has stated that if Alternative 4 is selected, the project would be unlikely to be built since it would have difficulties obtaining adequate financing for the project due to additional costs and delays.

**Comments**:

1. Thank you for providing clear maps and aerial photos showing the various transmission line alignment options, (Figures 2.3-1 to 2.7-3). We also appreciate the inclusion of Table 2.3-4 showing MATL's proposed environmental protection measures (page 2-20), and Appendix F showing MDEQ's revised environmental specifications, as well as Table S-2 providing an alternatives matrix that compares resource impacts of the alternatives (pages S-26 to S-44).

   The Appendix F environmental specifications protection measures are detailed and comprehensive. We support utilization of these environmental specifications and environmental protection measures to avoid or reduce the intensity and duration of impacts to the environment. We encourage use of the most comprehensive set of environmental protection measures using the most protective measures from both MATL's and MDEQ's lists.

   These maps, photos, and tables facilitate improved project understanding, help define issues, and assist in evaluation of alternatives providing a clearer basis of choice among options for the decisionmaker and the public in accordance with the goals of NEPA.

2. The EPA does not object to the proposed construction and operation of the MATL 230-kV transmission line from Great Falls, Montana into Alberta, Canada. Although, we recommend that the many environmental, social and economic tradeoffs may be better balanced and optimized with creation of a new modified preferred alternative that would use the better features from the existing action alternatives. We recommend the DOE and MDEQ consider construction of a new modified alternative that would better optimize the many environmental, social and economic trade-offs for this project (i.e., trade-offs in impacts to farm operations and residences, soil erosion during construction, water quality and wetland impacts, impacts to birds and wildlife habitat, costs, etc.).

   The intent should be to address project purpose and need and the significant issues while minimizing adverse environmental impacts. Additional alternatives evaluation in the FEIS may also better explain to the public the many trade-offs involved in making

transmission line decisions. This may also lead to improved public acceptance of decisions. In general desirable features we consider worthy of including in a new modified preferred alternative include:

- minimize soil disturbance and soil erosion by selecting alignments on less erosive soils and that reduce the extent of ground disturbance as much as possible;

- use monopoles rather than H-frame structures wherever possible to reduce soil disturbance and impacts to farm operations;

- incorporate appropriate construction sediment and erosion control methods and BMPs, as well as weed prevention and control measures during construction;

- minimize new access roads and new road construction, and locate any new roads that may be needed where they have minimal impacts, away from rivers, streams and wetlands;

- minimize stream and lake crossings, and disturbances of wetlands and riparian areas;

- minimize disturbances to sensitive wildlife habitat, and use appropriate mitigation measures to reduce wildlife impacts, particularly transmission line mortality to birds;

- minimize adverse impacts to farm operations and residences;

- minimize fragmentation of open landscapes from a scenic standpoint, and use topographical features to help screen the transmission poles as much as possible;

- consider costs of construction and operation.

We note of course that the MDEQ and DOE will need to evaluate and analyze the impacts of any new modified alternative, and display those impacts in the FEIS.

We also want to state that Alternative 3 appears to have the shortest transmission line alignment (121.6 miles) with the fewest stream and lake crossings (12), fewest acres of wetlands within the 500 foot alignment (62.3 acres), and least amount of construction ground disturbance (206 acres); while Alternative 4 has the longest transmission line (139.6 miles) with greatest number of stream and lake crossings (19), greatest potential wetland impact (76.4 acres), and greatest ground disturbance (240 acres), although Alternative 4 would reduce impacts to farm operations. Alternative 2 would be 129.9 miles long with 14 stream and lake crossings (Table 3.5-1, page 3-63), and 76.4 acres of potential wetlands impacts, and 214 acres of ground disturbance (page 3-90). It appears to us that Alternative 3 would have fewer environmental impacts than the other action alternatives.

We recognize that there are many considerations and trade-offs involved in evaluating the transmission line alternatives, but we want to emphasize our interest in seeing that minimization of environmental impacts is considered to be an important criterion in the decision making process. We encourage efforts to support reductions in soil, water, wetlands, fisheries and wildlife impacts of the alternative alignments when evaluating the many project trade-offs.

We also believe that the FEIS and Record of Decision (ROD) should clearly explain the process and underlying rationale for the selection of the Preferred Alternative, and the environmentally preferred alternative should be identified in the ROD [40 CFR 1505.2(b)].

3. We are pleased that the DEIS states that MATL anticipates only minimum development of new access roads to construct, operate, and maintain the proposed transmission line (page 2-15). Construction of access roads is an important aspect of the project, since road construction and road operation and maintenance can result in adverse effects to water quality and other resources. Sediment from roads, particularly during road construction and reconstruction, and from poorly maintained roads with inadequate road drainage, is often a major cause of adverse water quality impacts, particularly where roads are near streams and there are many stream crossings.

It will be important for MATL, MDEQ and DOE to minimize new road construction, as well as to properly plan and design access roads, and to properly maintain roads and utilize adequate sediment and erosion control BMPs during road construction to minimize erosion and reduce sediment production and transport from roads.

Table 2.3-2 (page 2-13) estimates 3, 5, and 7 miles of new access road construction with Alternatives 2, 3 and 4, respectively. We did not see clear disclosure of the number of the number of road stream crossings associated with the proposed new access roads. The number of new road stream crossings for new access roads should be disclosed for each alternative in the FEIS. We also suggest that MATL, DOE and MDEQ review and consider our general recommendations regarding road construction in regard to new access roads, which are:

* minimize road construction and reduce road density as much as possible to reduce potential adverse effects to watersheds;

* locate roads away from streams and riparian areas as much as possible;

* locate roads away from steep slopes or erosive soils;

* minimize the number of road stream crossings;

* stabilize cut and fill slopes;

* provide for adequate road drainage and control of surface erosion with measures such as adequate numbers of waterbars, maintaining crowns on roads, adequate numbers of rolling dips and ditch relief culverts to promote drainage off roads avoid drainage or along roads and avoid interception and routing sediment to streams;

* consider road effects on stream structure and seasonal and fish spawning habitats;

* allow for adequate large woody debris recruitment to streams and riparian buffers near streams;

* properly size culverts to handle flood events, pass bedload and woody debris, and reduce potential for washout;

* replace undersized culverts and adjust culverts which are not properly aligned or which present fish passage problems and/or serve as barriers to fish migration;

* use bridges or open bottom culverts that simulate stream grade and substrate and that provide adequate capacity for flood flows, bedload and woody debris where needed to minimize adverse fisheries effects of road stream crossings.

We also encourage conduct of inspections and evaluations to identify conditions on roads that may cause or contribute to sediment delivery and stream impairment, and to correct road conditions impacting streams. It is important that road maintenance (e.g., blading) be focused on reducing road surface erosion and sediment delivery from roads to area streams. Grading (blading) of unpaved roads in a manner that contributes to road erosion and sediment transport to streams and wetlands should be avoided. Practices of expediently sidecasting graded material over the shoulder and widening shoulders and snow plowing can have adverse effects upon streams, wetlands, and riparian areas that are adjacent to roads. Road use during spring breakup conditions should also be avoided to limit runoff created road ruts during late winter thaws that increase road erosion (i.e., ruts channel road runoff along roads).

We also recommend that MATL and its road contractors and the agencies review road design and maintenance training videos available from the Forest Service San Dimas Technology and Development Center for use by road contractors (e.g., "Forest Roads and the Environment"-an overview of how maintenance can affect watershed condition and fish habitat; "Reading the Traveled Way" -how road conditions create problems and how to identify effective treatments; "Reading Beyond the Traveled Way"-explains considerations of roads vs. natural landscape functions and how to design maintenance to minimize road impacts; "Smoothing and Reshaping the Traveled Way"-step by step process for smoothing and reshaping a road while maintaining crowns and other road slopes; and "Maintaining the Ditch and Surface Cross Drains"-instructions for constructing and maintaining ditches, culverts and surface cross drains;

http://www.fs.fed.us/eng/techdev/sdtdc.htm , contact Greg Napper, at 909-599-1267 x 290).

4. As you know, there can be public health concerns regarding electric fields created by a high-voltage transmission lines, since electromagnetic fields (EMF) field effects can include induced currents, steady-state current shocks, spark discharge shocks, and in some cases field perception and neurobehavioral responses. We appreciate the analysis and discussion regarding potential health and environmental effects associated with electromagnetic fields induced by the transmission line (Section 3.4). We are pleased that this DEIS analysis predicts that the level of electromagnetic fields will be below the standard and within the biologically based recommendations (page 3-50).

5. Thank you for providing Figure 3.5-1 showing watersheds intersecting the study area (page 3-58), and Figure 3.5-2 (page 3-60) showing water quality impaired streams that may be crossed by the transmission line (i.e., Old Maids Coulee -an intermittent stream, Pondera Coulee, Cut Bank Creek, Marias River, Teton River, Lake Creek, the Missouri River, and Benton Lake). A Total Maximum Daily Load (TMDL) and Water Quality Plan will need to be prepared for all impaired streams listed by the State of Montana under Section 303(d) of the Clean Water Act to promote water quality restoration. It will be important that the proposed MATL transmission line project be consistent with the MDEQ's preparation of TMDLs and Water Quality Plans for impaired waters.

   Consistency with a TMDL that has not yet been completed means that any additional degradation of the impaired water (i.e., pollutant increase) should be avoided and if pollutants may be generated that would enter impaired waters during project activities (e.g., sediment), mitigation or restoration activities should also be included in the project to reduce pollutant sources to offset or compensate for pollutants generated during project activities. Recognizing uncertainties and desiring a margin of safety, such compensation should more than offset pollutants generated, resulting in overall reductions in pollution. Watershed restoration activities that compensate for pollutant production during management activities in watersheds of 303(d) listed streams should be included in such projects, and restoration activities should be implemented within a reasonable period of time in relation to pollutant producing activities (e.g., within 5 years).

   The aforementioned MATL environmental protection measures and MDEQ environmental specifications, including preparation of an Erosion Control Plan (page 2-20) and Stormwater Pollution Prevention Plan (SWPPP, page 2-22) appear to address the need to use adequate BMPs and erosion and sediment control measures during and following construction. The State contact for construction storm water permitting activities is Brian Heckenberger of the Montana DEQ at 406-444-5310. These mitigation activities should reduce or minimize erosion and sediment production and transport during construction, however, even with use of BMPs it is likely that some additional pollutant (sediment) delivery to 303(d) listed streams may still occur.

We believe the FEIS should identify and discuss watershed restoration activities to control other existing sediment sources in order to provide compensation for the sediment production and transport associated with transmission line and road construction activities for 303(d) listed streams (e.g., stabilize existing eroding banks; improve/install BMPs on additional existing roads perhaps in cooperation with local governments to reduce existing road sediment sources). Activities to control and reduce existing sediment sources are needed to provide full assurance that no further degradation occurs to 303(d) listed streams during transmission line and road construction, since a small amount of sediment transport is still likely to occur even with use of BMPs during transmission line and road construction. Unless existing sediment sources are reduced, 303(d) listed streams will be further degraded by transmission line and road construction.

We also encourage the DOE and MDEQ Major Facility Siting Act staff to contact MDEQ's TMDL Program staff to assure that the MDEQ Watershed Protection and TMDL staff consider the proposed project to be consistent with MDEQ's development TMDLs and Water Quality Plans for the applicable TMDL Planning Areas (contact Robert Ray of the MDEQ in Helena at 444-5319).

6. EPA considers the protection, improvement, and restoration of riparian areas and wetlands to be a high priority. Wetlands and riparian areas increase landscape and species diversity, support many species of western wildlife, and are critical to the protection of water quality and designated beneficial water uses. Potential impacts on riparian areas and wetlands include: water quality, habitat for aquatic and terrestrial life, flood storage, ground water recharge and discharge, sources of primary production, and recreation and aesthetics.

Executive Order 11990 requires that Federal Agencies *"take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency's responsibilities..."* and agencies are further directed to *"avoid undertaking or providing assistance for new construction located in wetlands unless the head of the agency finds (1) that there is no practicable alternative to such construction, and (2) that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use..."*. In addition national wetlands policy has established an interim goal of **No Overall Net Loss of the Nation's remaining wetlands**, and a long-term goal of increasing quantity and quality of the Nation's wetlands resource base.

We are pleased that impacts to wetlands, riparian areas and floodplains are discussed (Section 3.6), and that wherever possible placement of new structures constructed and associated construction activities would occur outside wetland areas (pages 2-23, 3-8). Although we would rather see a strict prohibition on placing new structures and access roads in wetland areas, rather than just doing this "wherever possible." We would like to see wetland and riparian areas fully spanned to avoid any direct impacts. We also support the MDEQ environmental specification to delineate wetlands along the selected alignment (page 3-81), and further recommend that wetland areas along the ROW be

flagged on the ground to facilitate wetland avoidance and "inadvertent" impacts by the contractor during construction.

It will be important to obtain appropriate State, local and Federal permits and authorizations for conduct of construction work in or near streams and wetlands (e.g., Section 318 short term turbidity exceedance authorization, 310 or 124 permits, MPDES Stormwater permits, Corps of Engineers 404 permit, etc.). As you know discharges of fill material into wetlands and other waters of the United States are regulated by Section 404 of the Clean Water Act, 33 U.S.C. 1344, which is administered jointly by the U.S. Army Corps of Engineers and EPA. It is important that MATL and the DOE and MDEQ consult with the Corps of Engineers in regard to 404 permit requirements for construction activities in or near streams or wetlands, (e.g., contact Mr. Allan Steinle of Corps of Engineers Montana Office in Helena at 406-441-1375). The 404(b)(1) Guidelines (found at 40 CFR Part 230) provide the environmental criteria by which 404 permits are evaluated. See Corps of Engineers Montana Regulatory Office website for further information, https://www.nwo.usace.army.mil/html/od-rmt/mthome.htm .

The DEIS states that there could be alterations to wetland hydrology, wetland plant communities and filling of wetlands or sedimentation of wetlands (page 3-74), although no direct filling of wetlands is intended. The DEIS suggests that wetland impacts would be minor and of short duration (page 3-76). Presently the DEIS identifies wetland acreage within the 500 foot ROW, but the estimated acreage of wetlands to be filled or altered is not clearly identified. It is stated that construction activities adjacent to wetlands could inadvertently result in disturbance to wetlands. We recommend that a wetland buffer zone be applied to avoid even inadvertent construction impacts to wetlands (e.g., 50 foot wetland buffer zone).

If construction buffer zones that avoid even inadvertent impacts to wetlands are not used the impacts to wetlands should be quantified as much as possible. The FEIS should either include a requirement for wetland buffers to achieve no impacts, or clearer identification and quantification of the "inadvertent" impacts to wetlands should be provided. We suggest that a table be provided in the FEIS showing the acreage of wetlands likely to be impacted by the project alternatives, along with a discussion of the associated wetland functions and values that may be impacted.

If it appears that wetland impacts are more significant, and particularly if there are significant wetland and/or river and stream dredge and fill impacts, we generally recommend that a 404(b)(1) analysis be included as an Appendix to the FEIS, since inclusion of a draft 404(b)(1) analysis helps assure that 404 permit requirements are properly integrated into the NEPA process in accordance with 40 CFR 1500.2(c).

Section 404 Dredge and Fill Permit rules/policies require that adverse impacts to aquatic resources be avoided and minimized as much as possible, and that unavoidable impacts to wetlands be compensated for. If there will be impacts to wetlands including "inadvertent filling" these impacts should be mitigated via wetlands restoration/creation/enhancement

to compensate for wetlands impacted by transmission line and/or road construction to assure that there will be no net loss of wetlands as a result of the proposed project. The goal of wetland mitigation should be to replace the functions and values of impacted wetlands in areas adjacent to or as close as possible to the area of wetlands loss. Wetland restoration is preferred to wetland creation or enhancement because restoration has a higher rate of success.

EPA/Corps policy has accepted acre-for-acre replacement of wetlands as a surrogate for replacement of functions and values when there is a lack of definitive information on functions and values, although adjustments may be necessary to reflect the expected degree of success of mitigation, and provide an adequate margin of safety to reflect anticipated success (i.e., greater than acre-for-acre replacement is suggested when impacted wetlands have high function & value and likelihood of replacement of functions is low). Traditional mitigation is often not successful in fully restoring wetland function, and 2:1 or higher mitigation ratios are sometimes required to mitigate wetlands impacts. Construction/enhancement of wetlands to compensate for impacted wetlands should occur in advance or concurrent with activities causing wetlands impacts to reduce temporal losses of wetland functions.

If a project has significant wetland impacts we also generally recommend that a Wetland Mitigation Plan be prepared to assure that adequate replacement of lost wetland functions and values occurs. This mitigation plan should include consideration of direct, indirect, and cumulative effects. It should contain a statement of goals, a monitoring plan, long-term management/protection objectives and a contingency plan (a commitment to conduct additional work if required to meet the goals of the plan). The mitigation plan should also include best management practices and mitigation measures that will manage stormwater runoff from roadways before it reaches wetlands, streams and other aquatic habitats. In general, wetlands, including mitigation wetlands, should not be used for treatment of stormwater. This Plan should be approved by the appropriate agencies before implementation of the proposed project.

The final EIS should more clearly identify and disclose probable wetland impacts, as well as the mitigation activities that would compensate for unavoidable impacts to wetlands. This information could be provided in the narrative of the EIS or in the 404(b)(1) analysis appended to the EIS. This may be most necessary for Alternative 4 that is stated to have the highest potential for wetland impacts (page 3-77).

7. As you know construction activities that involve soil disturbance create conditions favoring the spread of noxious weeds. We support use of noxious weed mitigation and control methods during transmission line construction, since many noxious weeds can out-compete native plants and produce a monoculture that has little or no plant species diversity or benefit to wildlife. We are pleased that the MATL and MDEQ environmental measures include measure to limit and control weeds along the transmission line ROW, and that a MATL integrated weed control plan would be prepared, and that MATL would report annually on the condition and progress of weed

control efforts (page 3-91).

We note that while the MDEQ measures generally appear to be more detailed and comprehensive than the MATL measures (Table 2.3-4), the MATL measures identify the need to wash vehicles and construction equipment before entering the transmission line ROW to reduce spread of weed seeds. We support this measure did not see it in the MDEQ environmental specifications. We recommend careful review of the MATL measures in comparison to the MDEQ measure to assure that the most comprehensive and effective set of environmental protection measures are used.

Weed prevention is the most cost-effective way to manage and control weeds by avoiding new infestations and spread of weeds, and thus, avoiding the need for subsequent weed treatments (e.g., weed prevention practices such as minimizing ground disturbance, revegetating disturbed areas, use of weed free seed, cleaning vehicles and equipment, and other practices that prevent infestation and spread of weeds). Early recognition and control of new infestations avoids wider future use of herbicides and other control methods. We also support use of gates on access roads to discourage ATV/recreational vehicle travel on these roads, since such motorized uses disturb soil, create weed seedbeds, and disperse weed seeds.

We appreciate the recognition in the MDEQ environmental specifications of the need to use certified herbicide applicators, and to use herbicides in accordance with label specifications, and to be cautious in spraying near streams and wetlands with use of no spray buffer zones along streams and wetlands. Herbicide drift into streams and wetlands could adversely affect aquatic life and wetland functions such as food chain support and habitat for wetland species.

We recommend use of 50 feet no spray buffer zones adjacent to streams and wetlands, and mechanical weed removal or hand-pulling of weeds adjacent to aquatic areas. Hand-pulling can be effective for weeds that do not contain extensive root systems near surface waters. It may be helpful to add a list of those weed species which can be effectively hand-pulled (i.e. those without large tap roots and spreading rhizomatous root systems). The herbicide application technique of hand or manual wipe-on (especially applicable for contact systemic herbicides such as glyphosate) is an option to control individual weed plants up to the existing water level adjacent to streams or sensitive aquatic sites.

Herbicides should be applied at the lowest rate effective in meeting weed control objectives and according to guidelines for protecting public health and the environment. All efforts should be made to avoid movement or transport of herbicides into surface waters that could adversely affect public health, fisheries or other water uses. The Montana Water Quality Standards include a general narrative standard requiring surface waters to *be free from substances that create concentrations which are toxic or harmful to aquatic life*.

It is important that the water contamination concerns of herbicide usage be fully evaluated and mitigated. All efforts should be made to avoid movement or transport of herbicides into surface waters that could adversely affect fisheries or other water uses. Herbicides, pesticides, and other toxicants and chemicals must be used in a safe manner in accordance with Federal label instructions and restrictions that allow protection and maintenance of water quality standards and ecological integrity, and avoid public health and safety problems.

Herbicide applicators should be advised of the potential for runoff of herbicides at toxic concentrations into the streams. The applicators should take precautions during spraying (e.g., applying herbicide only after careful review of weather reports to ensure minimal likelihood of rainfall within 24 hours of spraying; special precautions adjacent to the stream to reduce runoff potential; etc.). It should be unequivocally stated that no herbicide spraying will occur in streams and wetlands or other aquatic areas (seeps, springs, etc.). Streams and wetlands in any area to be sprayed be identified and flagged on the ground to assure that herbicide applicators are aware of the location of wetlands, and thus, can avoid spraying in or near wetlands.

We are particularly concerned about potential use of more toxic and persistent herbicides such as picloram (Tordon), since they have higher potential for more serious stream and/or groundwater contamination. We recommend that roadside drainage areas leading to intermittent and perennial streams be flagged as no-spray zones and not sprayed with picloram based herbicides. We also recommend that picloram not be used at rates greater than 0.25 lbs/acre, and suggest that MATL and the agencies consider applications of persistent herbicides such as picloram only once per year.to reduce potential for accumulation in soil. Potential for persistant herbicides to accumulate in soil in harmful amounts are reduced if sites are treated only once per year (twice being the limit). Trade-offs between effective weed control and effects on soil productivity and leaching concerns may need to be considered. A second treatment application if needed should only occur after 30 days (or according to label directions).

For your information, Dow AgroSciences, the manufacturer of Tordon 22K, has recently developed supplemental labeling for Tordon 22K for areas west of the Mississippi River. They have directions for wick or carpet roller applications. Tordon 22K herbicide can be applied using wick or carpet roller equipment where drift presents a hazard to susceptible crops, surface waters, and other sensitive areas. One part Tordon 22K is mixed with 2 parts water to prepare a 33% solution. The wick method of application is more labor intensive but very effective at targeting particular noxious weeds adjacent to surface waters, wetlands, or protected plants.

Most picloram products, including Tordon 22K, are Restricted Use Pesticides (RUPs) requiring pesticide applicator certification to purchase and apply. It is important that herbicide applicators be certified throughout the duration of the project. If commercial applicators will be contracted for RUP applications, we recommend checking to make sure their MT commercial RUP license is current. Please contact Montana Dept. of

Agriculture at (406) 444-5400 for more information. Also, please note that registration for Access (which has picloram as an active ingredient) is cancelled.

For your information, the website for EPA information regarding pesticides and herbicides is http://www.epa.gov/pesticides/ . The National Pesticide Telecommunication Network (NPTN) website at http://nptn.orst.edu/tech.htm which operates under a cooperative agreement with EPA and Oregon State University and has a wealth of information on toxicity, mobility, and environmental fate on pesticides which may be helpful (phone number 800-858-7378).

8. As you know transmission lines can result in avian mortality particularly due to bird collisions with the transmission line. We are pleased that the DEIS states that areas with a higher likelihood of collisions, known flyways, would be avoided (Page 3-107). It would be of interest to identify in the FEIS the known avian flyways that will be avoided. We recommend that the FEIS include maps that identify locations of important migration corridors of birds and along with identified potential collision hazard areas. This will provide the public and the decision maker with a clear understanding of the locations where effects to avian species are likely to be the greatest, and assist in selecting alignments that avoid flyways, and help focus the identification and evaluation of mitigation measures needed to eliminate or reduce avian effects.

We are pleased that MATL would apply. *"Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006"* developed by the EEI, APLIC and the California Energy Commission (2006), during design and construction of overhead structures and the substation additions; and that avian collisions would be reduced as approved line marking devices would be installed, at intervals suggested by manufacturer's recommendations, on overhead ground wires within all stream, river and wetland crossings, such as crossings of the Marias River, the Dry Fork Marias River, Teton River, east of the Benton Lake NWR boundary and within a ½ mile of the refuge boundary. Line marking devices would also be placed within a ¼ mile buffer on either side of streams, rivers, or wetlands.

In addition, the DEIS states that annual mortality surveys would be conducted to ensure that line marking devices are functioning properly. We recommend that the field surveys be conducted during the spring and fall migratory periods and the spring nesting period to locate birds which have been electrocuted or have struck transmission lines to aid in the process of identifying and modifying problem areas.

9. The DEIS indicates that the proposed action would result in an increase in activities that could adversely affect air quality during construction (short term), and during operation and maintenance of the transmission line (long term) (page 3-136). The DEIS does not report any air quality non-attainment areas along the alternative alignments, and states that Federal/State air quality Class I areas located within 100 miles of the project area include Scapegoat Wilderness (50 miles west), Bob Marshall Wilderness (50 miles west),Glacier National Park (40 miles west), and Gates of the Mountains Wilderness (50

miles southwest). The project area has meteorological conditions that provide for good dispersion of air pollutants.

Air quality impacts would result from use of equipment and vehicles during construction and during operation and maintenance (i.e., pollutant emissions of carbon monoxide, carbon dioxide, sulfuroxides, PM-2.5, nitrogen oxides, volatile organic hydrocarbons, aldehydes, and polycyclic aromatic hydrocarbons), and creation of fugitive dust and particulates during construction.

We are pleased that fugitive dust would be controlled through dust control measures such as water sprays, limiting the speed of construction equipment, and reseeding the disturbed areas at the end of the construction period, and that gaseous emissions would be limited through construction management and scheduling. In addition we recommend limiting diesel emissions by reduced idling and modern diesel engines and/or use of Ultra Low Sulfur Diesel in the construction equipment, and including rock crushing and other material production and processing that may be needed during construction of access roads in the efforts to minimize fugitive dust.

10. Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," requires federal agencies to make environmental justice part of their missions by identifying and addressing, as appropriate, disproportionately high and adverse human health and environmental effects of its programs, policies, and activities on minority populations (e.g. Native American) and low-income populations. We are pleased that the DEIS includes evaluation of environmental justice considerations for the proposed transmission line (page 3-176), concludes that no that no disproportionately high and adverse impacts would be expected for minority or low-income populations (page 3-181).

11. The DEIS states that wind farms have purchased all the power shipping capacity of the proposed transmission line (Table 4.1-1, page 4-2), but that because capacity rights are a commodity that may be resold or traded, the original wind farm purchasers may not be the power suppliers that use the line. Accordingly, the DOE does not consider wind farms that may be served by the proposed transmission line to be "connected actions as defined in 40 CFR 1508.25(a) (page 4-2). The DOE believes the proposed MATL line has an existence and utility independent from the wind farms, and impacts from potential wind farms are evaluated as cumulative impacts in accordance with 40 CFR 1508.7.

Table 4.1-2 (page 4-6) shows the potential reasonably foreseeable future power generation projects in the vicinity of the MATL line. These include several wind farms as well as the 250 MW Highwood Coal Fired Generating Station, and the 275 MW Great Falls Energy Partners Gas Fired Power Plant. We have concerns regarding the cumulative effects of the reasonably foreseeable future actions, particularly the cumulative effects of air pollutant emissions of new power plants and the effects of many new wind farms on avian species.

It will be important that additional site-specific NEPA analysis occur to evaluate and mitigate adverse effects for these future actions to the maximum extent possible. As noted above, we recommend that the FEIS include maps that identify locations of important migration corridors of birds and along with identified potential collision hazard areas, since this information may also assist in locating new wind farms away from avian flyways.

12. The DEIS states that the proposed transmission line would extend north in Alberta, Canada to a new substation to be constructed northeast of Lethbridge, Alberta (page 1-1). The proposed line would be part of the Western Interconnection, and a phase shifting transformer would be installed at the substation near Lethbridge to control the direction of power flows on the line. The DEIS does not provide much information about the 77 construction of the transmission line and new substation in Alberta, Canada or the proposed 77 mile route of the Canadian transmission line.

We recommend that the FEIS identify the agency responsible for construction of the transmission line in Canada, and a contact person with that agency, and provide a discussion of the applicability of Executive Order 12114 *Environmental Effects Abroad of Major Federal Actions* and *CEQ's Guidance on NEPA Analyses for Transboundary Effects, July 1, 1997* in regard to the proposed MATL transmission line (http://www.nepa.gov/nepa/regs/transguide.html ). We recommend that additional information about project implementation in Canada and any significant environmental effects that may occur as a result should be provided in the FEIS.